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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

EDGAR, RICHARD A

ART UNIT	PAPER NUMBER
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3745

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/796,703

Applicant(s)

HANCOCK, STEPHEN S.

Examiner

Richard Edgar

Art Unit

3745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25-32 is/are allowed.
- 6) ☒ Claim(s) 1-17 and 19-24 is/are rejected.
- 7) ☒ Claim(s) 18 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/2004 and 12/2004.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Drawings

The drawings are objected to because the lead line for reference numeral 46 in Fig. 19 does not extend to the feature indicated (see 37 C.F.R. § 1.84(q)).

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 51a (Fig. 19), 55 (Figs. 20 and 21). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

In paragraph 0048, line 2, "A" should be -- a --.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 1 recites the broad recitation "for a motor driven air handling blower", and the claim also recites, "particularly adapted for HVAC systems" which is the narrower statement of the range/limitation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 and 7-13 as far as they are definite, are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 4,865,517 (Beehler hereinafter) in view of United States Patent No. 5,474,422 (Sullivan hereinafter) in view of *Plastics Engineering*, 3rd edition (by R.J. Crawford).

Beehler discloses a blower housing for a motor 50 driven centrifugal air handling blower, said blower housing comprising: a first housing part 42 including at least a part of an air inlet opening 72 and at least a part of an air discharge opening 48; a second housing part 44 including at least a part of an air discharge opening 48; each of said housing parts 42,44 includes a boss 110, 112 located to be adjacent to a corresponding boss of the other of said housing parts when said housing parts are assembled one to the other; a removable clip 114 adapted to engage said bosses to secure said housing parts to each other (see Fig. 4); and the housing parts are formed of a plastic able to withstand highly corrosive exhaust gases (see col. 2, lines 15-18).

The housing parts 42,44 are connectable to each other at respective peripheral edges disposed along a parting line which lies in a plane generally normal to the axis of

rotation of a blower impeller 54 adapted to be disposed in the blower housing (see Fig. 3).

One of the housing parts 42 includes a flange 132 extending along the peripheral edge of the one housing part and the other of the housing parts 44 includes a groove 130 disposed along the peripheral edge of the other housing part for receiving the flange 132 for locating the housing parts in predetermined positioned with respect to each other.

Each of the housing parts include plural spaced apart bosses 115 positioned to be adjacent to corresponding bosses of the other of the housing parts when the housing parts are assembled one to the other, and the blower housing includes respective clips 114 adapted to engage the cooperating bosses to secure the housing parts to each other.

The bosses are tapered toward each other and the clips include opposed tapered flanges engagable with respective one of the bosses for registering the clips with the bosses in a wedge configuration (see Figure 1 below).

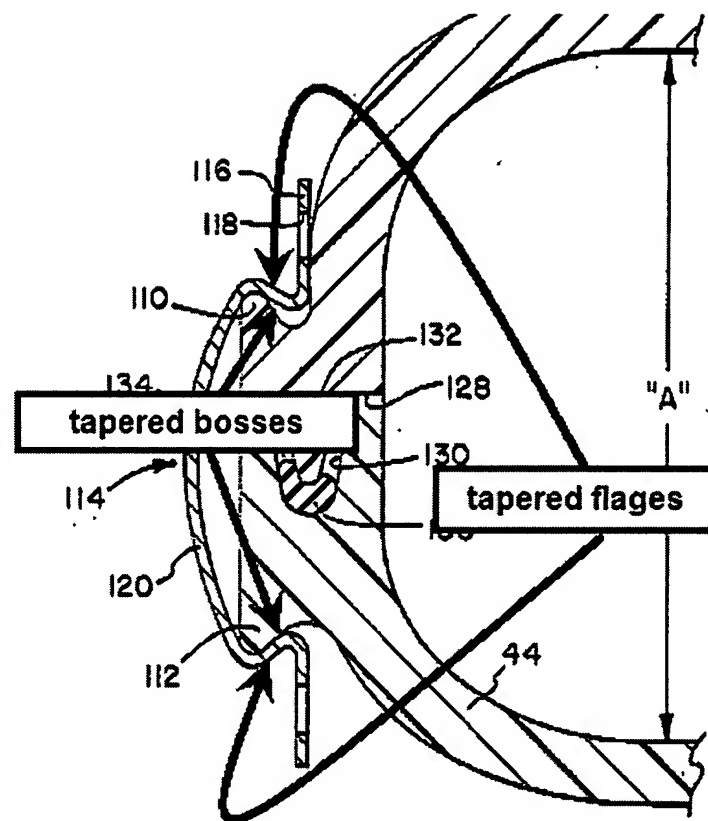


Figure 1 Beehler annotated Fig. 4.

The housing parts curve (see Fig. 3).

The housing parts form a scroll (see Figs. 2 and 3) which housing increases in radial direction and axial direction toward the outlet.

Beehler does not teach the second housing part 44 having a part of an air inlet opening.

Sullivan shows two blower housing halves assembled together wherein each half 10, 11 has an air inlet 51, 52 for the purpose of exposing the impeller to a greater volume of air.

Since the Beehler blower housing is enclosed in a furnace (see Beehler Fig. 1) and Sullivan teaches that a blower housing should have openings on both sides of the housing for exposing the impeller to a greater volume of air, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the second housing part of Beehler to have part of an air inlet opening therethrough, as taught by Sullivan, for the purpose of exposing the impeller to a greater volume of air.

Beehler in view of Sullivan does not teach if the plastic material is a fibre reinforced thermoset polymer, including a polyester resin.

Plastics Engineering describes that thermosetting plastics are not sensitive to heat (see sentence bridging pages 5 and 6), and that fibre reinforcements are used in thermoset plastics for the purpose of increasing the strength of the material (see pages 8-9), including a polyester resin impregnated with glass fibers (page 9).

Since the Beehler in view of Sullivan plastic blower housing is utilized in a furnace, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to make the plastic blower housing of Beehler in view of Beehler from a thermosetting fibre reinforced plastic (polyester resin), for the purpose of rendering the blower housing not sensitive to heat and maximizing the strength of the plastic, as described in *Plastics Engineering*.

Claims 14-17, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 4,865,517 (Beehler hereinafter) in view of *Plastics Engineering*, 3rd edition (by R.J. Crawford).

Beehler shows a blower housing 40 for a motor 50 driven air handling blower, said blower housing comprising: a first housing part 42; a second housing part 44; said housing parts being connectable to each other along cooperating peripheral edges of the housing parts extending generally normal to an axis of rotation of a blower impeller 54 adapted to be disposed in the blower housing (see Fig. 3); and the housing parts are formed of a plastic able to withstand highly corrosive exhaust gases (see col. 2, lines 15-18).

One of the housing parts 42 includes a flange 132 extending along the peripheral edge of the one housing part and the other of the housing parts 44 includes a groove 130 disposed along the peripheral edge of the other housing part for receiving the flange 132 for locating the housing parts in predetermined positioned with respect to each other.

Each of the housing parts include plural spaced apart bosses 115 positioned to be adjacent to corresponding bosses of the other of the housing parts when the housing parts are assembled one to the other, and the blower housing includes respective clips 114 adapted to engage the cooperating bosses to secure the housing parts to each other.

The bosses are tapered toward each other and the clips include opposed tapered flanges engagable with respective one of the bosses for registering the clips with the bosses in a wedge configuration (see Figure 1 above).

Beehler does not teach if the plastic material is a fibre reinforced thermoset polymer.

Plastics Engineering describes that thermosetting plastics are not sensitive to heat (see sentence bridging pages 5 and 6), and that fibre reinforcements are used in thermoset plastics for the purpose of increasing the strength of the material (see pages 8-9).

Since the Beehler plastic blower housing is utilized in a furnace, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to make the plastic blower housing of Beehler from a thermosetting fibre reinforced plastic, for the purpose of rendering the blower housing not sensitive to heat and maximizing the strength of the plastic, as described in *Plastics Engineering*.

The claimed phrase "formed by compression molding" is being treated as a product by process limitation; that is, that the blower housing is made by compression molding. As set forth in MPEP 2113, product by process claims are NOT limited to the manipulations of the recited steps, only to the structure implied by the steps. Once a product appearing to be substantially the same or similar is found, a 35 USC 102/103

rejection may be made and the burden is shifted to applicant to show an unobvious difference. See MPEP 2113.

Thus, even though Beehler is silent as to the process used to mold the fibre reinforced thermoset plastic blower housing, it appears that the product in Beehler would be the same or similar as that claimed; especially since both applicant's product and the prior art product are made of a molded thermoplastic material and used in a hot corrosive environment.

Claim 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 4,865,517 (Beehler hereinafter) in view of United States Patent No. 5,474,422 (Sullivan hereinafter).

Beehler discloses a blower housing for a motor 50 driven centrifugal air handling blower, said blower housing comprising: a first housing part 42 including at least a part of an air inlet opening 72 and at least a part of an air discharge opening 48; a second housing part 44 including at least a part of an air discharge opening 48; each of said housing parts 42,44 includes a boss 110, 112 located to be adjacent to a corresponding boss of the other of said housing parts when said housing parts are assembled one to the other; and a removable clip 114 adapted to engage said bosses to secure said housing parts to each other (see Fig. 4).

The bosses are tapered toward each other and the clip includes opposed tapered flanges engagable with respective ones of the bosses for registering the clip with the bosses in a wedged condition (see Figure 1 above).

Each of the housing parts include plural spaced apart bosses 115 positioned to be adjacent to corresponding bosses of the other of the housing parts when the housing parts are assembled one to the other, and the blower housing includes respective clips 114 adapted to engage the cooperating bosses to secure the housing parts to each other.

Beehler does not teach the second housing part 44 having a part of an air inlet opening.

Sullivan shows two blower housing halves assembled together wherein each half 10, 11 has an air inlet 51, 52 for the purpose of exposing the impeller to a greater volume of air.

Since the Beehler blower housing is enclosed in a furnace (see Fig. 1) and Sullivan teaches that a blower housing should have openings on both sides of the housing for exposing the impeller to a greater volume of air, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the second housing part of Beehler to have part of an air inlet opening therethrough, as taught by Sullivan, for the purpose of exposing the impeller to a greater volume of air.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 4,865,517 (Beehler hereinafter) in view of United States Patent No.

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5,474,422 (Sullivan hereinafter) as applied to claim 21 above, and further in view of *Plastics Engineering*, 3rd edition (by R.J. Crawford).

Beehler in view of Sullivan teaches a plastic blower housing, but not a reinforced thermoset housing.

Plastics Engineering describes that thermosetting plastics are not sensitive to heat (see sentence bridging pages 5 and 6), and that fibre reinforcements are used in thermoset plastics for the purpose of increasing the strength of the material (see pages 8-9).

Since the Beehler plastic blower housing is utilized in a furnace, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to make the plastic blower housing of Beehler from a thermosetting fibre reinforced plastic, for the purpose of rendering the blower housing not sensitive to heat and maximizing the strength of the plastic, as described in *Plastics Engineering*.

The claimed phrase “formed of a compression molded reinforced thermoset” is being treated as a product by process limitation; that is, that the reinforced thermoset blower housing is made by compression molding. As set forth in MPEP 2113, product by process claims are NOT limited to the manipulations of the recited steps, only to the structure implied by the steps. Once a product appearing to be substantially the same or similar is found, a 35 USC 102/103 rejection may be made and the burden is shifted to applicant to show an unobvious difference. See MPEP 2113.

Thus, even though Beehler is silent as to the process used to mold the plastic blower housing, it appears that the product in Beehler would be the same or similar as

that claimed; especially since both applicant's product and the prior art product are made of a molded plastic material and used in a hot corrosive environment.

Allowable Subject Matter

Claims 25-32 are allowed.

Claim 6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claim 18 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 6 and 18 each requires the clip(s) to have a detent member disposed in a boss recess. Beehler does not fairly suggest such a securing feature, and one having ordinary skill in the art would not add such a feature to the Beehler clip since the Beehler clip locks by a spring force and not a detent/recess engagement.

Method claims 25-32 require, in addition to the Swin reference (WO 95/32363) teachings of securing two housing parts 12, 13 together with an impeller 15 therein between, a support bracket mounted on a fixture and one of the housing parts mounted on the support bracket. One having ordinary skill in the art would not have found it obvious at the time the invention was made to utilize a support bracket with the Swin

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reference since Swin shows to mount the housing to the intended fixture by using a fastener 22 which protrudes 27 from the housing (see page 13, lines 8-12).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Edgar whose telephone number is (571) 272-4816. The examiner can normally be reached on Mon.-Thur. and alternate Fri., 7 am- 5 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Richard Edgar
Examiner
Art Unit 3745

RE